

**Virginia Cave Board  
Saturday, April 3, 2004  
The Stone Lodge at Grand Caverns  
Grottoes, Virginia**

**Virginia Cave Board Members Present**

Ms. Barbara L. Moss, Chairman  
Dr. David C. Culver  
Mr. Joe Davis  
Mr. Bill Keith

Ms. Andrea Futrell  
Dr. John Holsinger  
Ms. Karen M. Kastning

**Virginia Cave Board Members Not Present**

Mr. Bob Barns  
Ms. Claire Ward  
Director Virginia Department of Historical Resources representative

Dr. Kurt Buhlmann

**Staff Present**

Mr. Joey Fagan  
Mr. Wil Orndorff

**Others Present**

Ms. Debbie Billhimer  
Dr. Lynn M. Ferguson  
Ms. Cynthia Miller  
Ms. Judy Molnar

Mr. Gary Moss  
Ms. Carol Tideman  
Mr. Andy Wells

**Call to Order**

Ms. Moss called the meeting to order at 1:20 p.m. and declared a quorum present.

**Introduction and Announcements**

Ms. Moss welcomed members, staff, and guests. All in attendance introduced themselves.

**Approval of Minutes from January 31, 2004**

MOTION: Dr. Culver moved that the minutes of the January 31, 2004 meeting of the Virginia Cave Board be approved as written.

SECOND: Mr. Joe Davis

DISCUSSION: None.

VOTE: Motion carried unanimously.

**Treasurers Report**

Ms. Kastning submitted the Treasurer's report to the Board.

**Old Business**

**Education Committee Report**

Ms. Moss discussed the 2004 Virginia Cave Week to be held concurrently with Earth Science Week, October 10 - 16. Plans for the 2004 Virginia Cave Week include printing and distribution of an educational poster featuring cave biodiversity designed by Dr. David Culver. Educational materials for teachers will be made available over the Internet and by postal mail upon request.

Work on revising and expanding the Virginia Cave Board website is being performed by DCR staff member, Ms. Megan Rollins.

**Environmental Response Committee**

Dr. David Culver discussed future projects of interest to the Board including the future construction of Interstate 73 and the widening of Interstate 81. Ms. Futrell reported that during the recent 2004 Environment Virginia Conference, Mr. Jeff Southard of VDOT said the National Environmental Policy Act (NEPA) project development process for the I-81 Project will take five years, and that karst was one of many factors VDOT was considering during the NEPA process. Members of the Cave Board expressed hope that during the course of the construction of the I-81 Project, Billy Williams Cave in Rockbridge County can be reopened and I-81 Cave in Smyth County can be preserved and secured. It was noted that sinkholes within 2000 feet of the I-81 Project right-of-way should be dye traced to define flow paths of possible contamination due to highway accidents.

### **Sinkhole Protection Committee**

Mr. Bill Keith reported on the committee's efforts to compile a list of existing laws and regulations that address sinkhole and karst issues including groundwater protection. The committee hopes to develop the list of pertinent laws and regulations within the next six months.

### **Sacrifice Cave Committee**

Dr. David Culver explained that a "sacrifice cave" is a cave that receives large amounts of non-organized or non-caver visitors. Conflicting goals are a problem when managing a cave receiving lots of traffic. High visitor volumes can cause a negative impact on significant caves, but such a cave does provide an educational experience for some persons. The committee is seeking to compile a list of caves receiving large numbers of visitors by members of the public as well as by local recreation departments and by youth groups such as the Boy Scouts and Girl Scouts. Anyone with information about sacrifice caves in Virginia should contact Dr. Culver.

### **Cave Owners Newsletter**

Ms. Karen Kastning reported that the next Cave Owners Newsletter would be published soon. She noted that a new editor is being sought for the newsletter, beginning with the next issue. Typically, 1600 copies of each issue are printed with approximately 1300 of those copies being mailed to Virginia cave owners.

### **Karst Program Report**

Mr. Wil Orndorff reported that two biologically significant caves would soon be a part of the Virginia Natural Area Preserve System. Unthanks Cave, in Lee County, was generously given earlier this year as a gift from The Nature Conservancy to the Virginia Department of Conservation and Recreation. Stay High Cave, in Giles County, is under contract and will become a part of the Natural Area Preserve System in the near future.

DCR Staff attended the Geological Society of America Northeastern Section and Southeastern Section Joint Meeting March 25 –27, 2004 in McLean, Virginia, where work by the DCR Karst Program was presented by Wil Orndorff in his paper, "Patterns of Karst Hydrological Systems Developed in Ordovician-Aged Carbonates of the Southwestern Virginia Valley and Ridge."

Work with the Virginia Speleological Survey continues to develop landscape areas rather than points for representing significant caves within the DCR Division of Natural Heritage GIS database. The current phase of the work will be completed by July 1, 2004, at which point development of conservation sites, areas in which land use could potentially impact significant caves, will proceed

Karst Program is working with the Virginia Tech Department Crop & Soil Environmental Science on a USDA Proposal to fund the study of nutrient flow in sinkholes.

The DCR Karst Program is performing ongoing karst hydrology studies involving dye tracing in Giles and Montgomery Counties.

### **Karst Education Report**

Mr. Wil Orndorff reported that Project Underground and Karst Education might become a contracted position administered through Virginia Tech, while still working as part of the DCR Karst Program.

Ms. Carol Zokaites has completed three Project Underground Workshops earlier this year and is planning a two-day facilitator training program at the Radford University's SELU Conservancy on April 28 -29, 2004.

### **Grand Caverns Update**

Ms. Cynthia Miller announced that Mr. Andy Wells is the new Executive Director of the Upper Valley Regional Park Authority.

Ms. Miller reported on a rock fall on a cliff near the entrance to the gift shop that occurred during the winter because of freeze and thaw cycles. She described the new access to the gift shop and the caverns that completely avoids exposure to the site of the rock fall.

On Sunday, April 25, 2004, Grand Caverns will hold a dedication ceremony for their new cave museum display.

### **New Business**

### **Dye Trace Registration and Regulation**

Mr. Wil Orndorff described the regulations regarding dye tracing in karst aquifers in Virginia. He pointed out the need for Virginia to adopt a dye trace registration program similar to one that exists in Kentucky. Such a voluntary registration program would avoid interference between dye traces by different investigators as well as provide a mechanism through which data from dye trace studies would be provided to state agencies.

Mr. Orndorff described the voluntary dye trace registration program use by the state of Kentucky. Under the Kentucky program, researchers performing dye traces in karst aquifers notify the state before any dye introductions. Results of dye trace studies are submitted for state records. Investigators who participate in Kentucky's voluntary dye trace registration are shielded from state penalties for responsibly conducted traces.

Participants in the voluntary registration program remain subject to civil liabilities for any damages resulting from their actions.

**Mossy Creek TMDL**

Mr. Wil Orndorff reported on flaws in a recent TMDL (Total Maximum Daily Load) development report for Mossy Creek in Augusta County. Results of a recent dye tracing investigation by the DCR Karst Program prove that extrabasinal flow through a karst system into Mossy Creek is responsible for much of the flow volume of Mossy Creek. The original TMDL Report on Mossy Creek ignored the significant additional contribution to the flow of Mossy Creek from North River and Freemason Run through the karst system. The report consequently ignored the potential benefits of installing Best Management Practices in the extrabasinal catchment area to help improve the water quality in Mossy Creek. Mr. Orndorff circulated a copy of a recent letter he has sent to Robert Brent of the Virginia Department of Environmental Quality that summarized the problems with the Mossy Creek TMDL.

MOTION: Mr. Bill Keith moved that the Virginia Cave Board write a letter to appropriate persons within the Virginia Department of Environmental Quality and The United States Environmental Protection Agency urging that karst hydrological factors be considered and addressed when formulating TMDLs.

SECOND: Mr. Joe Davis

DISCUSSION: None.

VOTE: Motion carried unanimously.

**Other New Business and Public Comments**

Mr. Joey Fagan reported on recent telephone conversations with several concerned citizens in Blacksburg, Virginia who have concerns about a planned sewer line through the Toms Creek Basin.

Ms. Karen Kastning reported that Rockydale Quarry is planning to open up a new limestone Quarry in Botetourt County.

Ms. Cynthia Miller announced that Grand Caverns was open for its regular season that extends from April 1 until October 1.

Ms. Judy Molnar announced that the Virginia Living Museum opened its new museum building on March 28, 2004. The new building includes a limestone cave exhibit. The Virginia Living Museum is seeking bats and a pack rat (already in captivity) for the museum, which is located at Newport News.

Members of the Board noted present and upcoming vacancies on the Cave Board and possible persons to fill those vacancies. All incumbents expressed a willingness to serve if reappointed to the Board.

Chairman Barbara Moss expressed thanks on behalf of the Virginia Cave Board to the Upper Valley Regional Park Authority and to the staff of Grand Caverns for hosting the day's meeting.

**Set Next Meeting Date**

The following dates and locations were chosen for future meetings of the Virginia Cave Board:

September 11, 2004 at the DEQ Office in Roanoke.

September 18, 2004 (alternate date at the same location as above)

November 6, 2004 at a location to be determined.

November 13, 2004 (alternate date).

**Adjournment**

Dr. Culver moved the meeting be adjourned. Ms. Futrell seconded. Ms. Moss adjourned the meeting at 3:50 PM.

Respectfully submitted,

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Barbara L. Moss  
Chairman

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Joseph H. Fagan  
Secretary